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PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements relating to Aircraft

We, SOCIETE ANONYME BELGE DE CON-
STRUCTIONS AERONAUTIQUES S.A.B.C.A., a
Belgian Company, of 13, rue de Brederode,
Bruxelles, Belgium, and HENRI CORNELIUS,
5 of Belgian Nationality, of 1, Place Constantin,
Meunier, Forest-Bruxelles, Belgium, do hereby
declare the nature of this invention and in
what manner the same is to be performed,
to be particularly described and ascertained
10 in and by the following statement:—

The present invention relates to improve-
ments in the landing wheels of aircraft and
relates more particularly to the type of landing
wheel which is provided with blades or vanes
15 which serve to rotate the wheel when the
aircraft is in flight so that the wheels are
already rotating prior to the aircraft touching
down. By causing the landing wheels to
rotate prior to the aircraft touching down the
20 shock to the wheels and undercarriage is
considerably reduced.

According to the present invention an air-
craft landing wheel of the type referred to is
characterised in that the blades have their
25 working surfaces substantially normal to the
medial plane of the wheel whilst their other
surfaces are inclined in relation to the said
plane.

Further, according to the invention, a cover
30 may be provided for the top part of the wheel
which cover is adjustable to permit control
of the number of blades exposed to the propul-
sive force of the air.

One form of the invention is illustrated in
35 the accompanying drawing in which the figure
is a perspective view of a landing wheel in
accordance with the present invention.

Referring to the drawing, a cover 1 in the
form for example of a hood or spat is provided
40 on the upper part of the wheel 2 and this hood
or spat made adjustable so as to control the
number of blades 3 exposed to the wind. In
this way the speed of rotation of the wheel
may be controlled.

45 The landing wheels may be provided with
known braking arrangements and these brakes
may be employed if desired to reduce the speed
of rotation of the wheels before the aircraft
touches down.

The blades 3 with their two faces are so 50
arranged that the face 4 lying normal to the
medial plane in which the wheel lies faces the
direction in which the plane flies when in the
lower half of the wheels rotation. The inclined
face 5 will correspondingly face the direction 55
in which the plane is flying over the upper
half of rotation of the wheel and the wind will
be deflected off this face 5 and so will not
materially affect the rotation of the wheel 60
in the correct direction by pressure of the wind
on the blades in the lower half of the wheels
rotation.

When a spat or mudguard is employed, the
spat being of the fixed type and not adjustable,
it may extend to the level of the axis of the 65
wheel. If, however, it is of the adjustable
type, it can be made adjustable over sub-
stantially the whole depth of the wheel.

Having now particularly described and
ascertained the nature of our said invention and 70
in what manner the same is to be performed,
we declare that what we claim is:—

1. An aircraft landing wheel of the type
referred to characterised in that the blades
have their working surfaces substantially 75
normal to the medial plane of the wheel whilst
their other surfaces are inclined in relation to
the said plane.

2. An aircraft landing wheel as claimed in
Claim 1 characterised in that a cover is pro- 80
vided for the top part of the wheel which cover
is adjustable to permit control of the number
of blades exposed to the propulsive force of the
air.

3. An aircraft landing wheel as claimed in 85
Claim 1 or Claim 2 characterised in that brakes
are provided on the wheel.

4. An aircraft landing wheel substantially
as described with reference to the accompanying
drawing. 90

Dated this 31st day of January, 1946.

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[This Drawing is a reproduction of the Original on a reduced scale.]

